

Language of the Universe...Maybe

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Language of the Universe...Maybe

This book is dedicated to the Musicians of the World

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Author's Preface

This book contains a large number of scientific hypotheses, none of which have been subjected to empirical research or testing. As such, the book will probably be considered of doubtful scientific value by experts.

The normally accepted scientific tradition, founded by Sir Isaac Newton, involves the full process of evaluation through empirical testing followed by the publication of the results in a blaze of glory.

The concept of keeping important scientific hypotheses secret, as Sir Isaac Newton was fond of doing, is doubtful. If Newton had published his preliminary results regarding the orbit of the moon, other scientists of his day could have helped to formulate the gravitational theory. Of course, this might have meant that Newton would have missed the individual glorification which many scientists seem to aspire to.

If I were to follow Newton's example, it would take me a lifetime simply to test one or two hypotheses. The rest would then die with me.

In our interdependent society I believe all scientists should work together as much as possible. I may have some useful hypotheses. Others may have the facilities to test and refine those hypotheses. Only by combining our efforts can we achieve the evolution of knowledge which may hold the key to our survival.

After all, who needs individual glory in an extinct society?

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Chapter 1. Career Prediction.

In May 1975, I was a Trainee Careers Officer studying for my Diploma of Vocational Guidance at the South Bank Polytechnic, London.

During that month I had been asked to compile a list of questions which would help me to interview school-leavers who needed vocational guidance. Up to that time, I had used my tutors approach. Now I had to think up my own approach.

First I had to decide upon a definition of vocational guidance. I decided to use the Employment and Training Act, 1973 as my main guide, and I paid particular reference to the definition of the vocational guidance service given to British citizens by the government information centres.

The Citizens' Advice Bureau, which informs parents and school-leavers of their rights in this respect under British law, stated in its handbook - "Young persons under 10, or over 15, and still at school may obtain advice on what is likely to be the most suitable career" (CANS - 1975).

Thus school-leavers would expect advice on "what is likely to be the most suitable career..." Careers were defined in my dictionary as "occupations leading to success". Fine, but what was meant by "most suitable?"

That question had been answered for me a month or so earlier by Miss Rachel Leyman, a Specialist Careers Officer at my employers' offices in Willesden, London. I had asked Rachel two questions, namely:

"What do school-leavers seek in a career?", to which Rachel had answered - "Status, variety, interest and jobs with people".

"What makes a good Careers Officer?", according to Rachel, the answer lay - "somewhere within the realms of philosophy and psychology".

In compiling my interview questions, I could manage those aspects of a career concerning status, variety and jobs with people; but how do you define 'interest'? This was a problem. People are interested in so many different things. The question of why they are interested in one thing rather than another would need an explanation, -- if satisfactory interview questions were to be compiled. Presumably the answer lay in the realms of philosophy and psychology, as Rachel had said.

I decided to answer the question of Interest by going back to first principles. I looked up the dictionary definition of psychology - "a branch of science studying the processes, motives, reactions and nature of the human mind". All right. But what did science mean? I couldn't remember. The answer - "any branch of knowledge based on systematic observations of facts and seeking to formulate general explanatory laws and hypotheses that could be verified empirically". Great.

In discovering the answers to vocational needs, I was really involving myself in career prediction. I was satisfied that the answer to a career prediction hypothesis lay in the correct judgement of a school-leaver's ability, personality and job environment.

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Ability could be tested fairly satisfactorily. The job environment could be easily determined, although not necessarily changed to suit the needs of the school-leaver. So that left personality.

I considered that personality and interest were essentially the same thing. Personality decided interest and interest decided personality.

The words "verified empirically", used in the definition of the word 'Science', indicated the effort which lay ahead in the verification of any hypothesis I might dream up. I would have to make a large number of observations of facts and amass a great deal of evidence. Bearing this in mind, I decided not to be too ambitious. I would look for something very simple and basic.

I reflected on the differences between myself and my brother. I have tended to be a bit of a day dreamer while he tended not to day-dream. I thought back to the time when I started to day-dream. I used to rock in my sleep from about the age of three onwards. My brother did not rock. I was awake as I rocked - my head resting on my fists - crouching under my eiderdown and rocking from side to side. I used to do this before going to sleep and before getting up in the mornings. I've seen other children doing the same thing.

So why was this? What caused it? Why didn't my brother rock or daydream? Did the day-dreaming make us different, and if so, how?

I worked out a hypothesis based upon day-dreaming, and tried it out on my fellow students. It was partly successful but not good enough to be right. So back I went to the drawing board.

Chapter 2. Performing Babies?

I decided to look at the way children were brought up in their very early years, and to look for simple differences. So what does a baby do in its early months after birth? According to books on the subject, it acts and reacts to its environment. If there is no human contact, it will die. Adult responses to a baby's needs are clearly very important.

Adult responses could provide a very basic and simple difference. All babies grow up under one of two conditions. Either they are brought up by a single parent, and respond to only one adult as they grow; or they are brought up by more than one parent, or adult, and consequently respond with more than one adult as they grow. A very simple & basic difference. Careful questioning might well reveal which situation existed for a school-leaver.

I visualised the two different situations. In the first case, the baby would cry and the single adult would respond with attention, food, nappy changing etc. As only the same single adult came each time, the baby would learn only to expect that one adult, when it cried, and thus would only learn to respond with one adult as it grew up.

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In the second case, when the baby cried, one of several adults would attend to it. The adults might include the father, grandmother, elder sister or aunts, as well as the baby's mother. This baby would learn to expect a variety of adults, and would respond differently with each. It would also learn which cry brought the largest number of adults.

After some thought, I decided that all babies were natural performers. They acted and entertained while the adults applauded. Sometimes the responses were good and sometimes they were bad. By trial and error, the babies would expand their repertoire of attention seeking performances.

I classified the baby brought up by a single adult, as an individual response seeker, or I.R.S. for short. The baby brought up by more than one adult was classified as a public response seeker, or P.R.S. Individual performers or public performers. Thus all babies were either an I.R.S. or a P.R.S. and since babies grow up to become adults, This classification would apply to everybody.

I was well satisfied with This basic hypothesis, as I could recall different types of children who exactly fitted these definitions. There was the sort of child who stood in the middle of a room and banged a toy drum, looking round to make sure everybody had noticed. Then there was the other sort of child who tugged at your sleeve to show you something secret - something only the two of you would know about. One child required a large audience, and knew how to get their attention; the other required an audience of one.

This hypothesis left me with the problem of the day-dreamer type, or the non-response seeker, still to be explained. I thought back to my brother and I. What about my relatives, my uncles and aunts, my cousins and my friends? What were the obvious, simple, basic differences?

I am older than my brother, by two years. That is one basic difference between us. Would that be too basic? No, nothing could be too basic for my hypothesis. Older or younger - that would be a difference,or rather elder, youngest or only child. That would apply to everybody. So what is the difference between the elder children and the others?

All children start off the same, in so far as they are either only children or the youngest child. They become elder children when another child is born or adopted. So what happens to an elder child in this situation? They are either an IRS or a PRS. They are used to performing and getting a response particularly from their mother. Then the next baby arrives, the mother must attend to that new baby. A mother cannot respond to both the elder child and the new baby at once. If the elder child demands first priority, it is likely to be rejected.

I decided that this was the vital difference between the elder children and the others. Depending on their age difference, all elder children would feel some element of rejection. The smaller the age difference, the greater the rejection feelings. IRS's would feel greater rejection than PBS's.

So what happened after rejection? The performer had performed am usual but the audience had not reacted. The elder child had demanded attention but the mother was too busy with the new baby to respond.

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I concluded that the child performer would blame either itself or the audience (mother) for its failure to get its usual response. If the elder child blamed itself - it would try to understand where its 'act' had gone wrong, and it would try to improve its 'performance'. Alternatively, if the elder child blamed the audience for its failure - it would try to cure the audience's "deficiency".

The children who tried to understand their failure and improve their performance, I called knowledge seekers. The Individual Response Seekers became Individual Knowledge Seekers, or IKS 's; while the P.R.S.'s became Public Knowledge Seekers, or P.K.S.'s.

The children who tried to 'cure' their audience, I called cure seekers. Individual Cure Seekers and Public Sure Seekers. ICS 's and PCS 's.

The knowledge seekers would become the natural and social scientists of the world, while the Cure Seekers would become the psychopaths of the world.

Now I had a very simple hypothesis based on childhood responses to adults. Although it was very simple and basic, It had already presented me with six personality types to look for in my career prediction empirical research.

I decided to rule out the cure seekers from my vocational guidance research.

They would remain part of the hypothesis of course, but I hoped they would not be among the school-leavers I was to interview:: This left me with four types, namely:-

1. IRS 's - Individual Response Seekers
2. PBS's - Public Response Seekers
3. IKS's - Individual Knowledge Seekers
4. PKS's - Public Knowledge Seekers

I have listed the likely career predictions for these types In Appendix A at the back of the book.

Chapter 3. Blood out of a stone.

Before putting my hypothesis to the test, I wanted to be sure in my own mind that it was more or less valid.

I remembered the old saying -- "You can't get blood out of a stone". This saying is taken from a fairy story where a little prince challenged a giant to a contest of strength. The one who could squeeze blood out of a stone would be the winner. On the night before the contest, the little prince collected some blood oranges (a type of orange whose juice is red in colour), and rolled them in the dust so that they looked like stones.

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The next day, when the contest started, the giant picked up a large stone - and squeezed, and squeezed, and squeezed; but no blood came out. The little prince then picked up one of the dusty oranges -- and squeezed out the blood red juice. Thus the giant was defeated and the prince went on to greater things.

The reason I remembered the saying -- and the story, was that I considered that no personality types could exist today, unless they had existed in our ancestors. Thus you can't get blood out of a stone -- "unless there is blood already in the stone". Equally, there could not be response seekers today unless they existed in our historical past. History was easy to check -- thanks to the work done by our historians and archaeologists. If the six personality types existed in the past, then the Hypothesis would be on a much sounder footing.

Before starting to check through my history books, I decided to make a number of predictions by defining the personality types and considering the effect they should have historically. If the predictions proved to be correct, the hypothesis would be immensely strengthened.

The base types in any society would be the IRS's and PRS's. If the others were to emerge, there would have to be conditions existing within the society which would allow the elder children to feel rejected.

From 1968 to 1972, I had lived in Australia. I spent two years at a place called Groote Eylandt, in the Northern Territories. I had been able to observe a tribe of aborigines living on the island and had talked to some of them about the way their society was organised.

Under tribal law, everything is communally owned, except wives and some personal property like spears etc. The children are looked after by their mothers and the older women in a communal way. Everything is communal. The hunting, the gathering of food, the cooking and mating, washing and dancing, -- all is done communally.

In these communal societies, the children grow up among many adults, and since children are precious to the survival of the tribe, they are not allowed to be rejected or to feel rejected.

Because of this communal system of child rearing, I would predict that these societies would produce public response seekers. No knowledge seekers would ever develop. Such communal tribes would never improve their methods of survival by their own inventions. They could only learn by responding with other tribes.

The lack of home-grown knowledge seekers would mean that technical and social advances would depend upon contact being established with other more advanced tribes. If no such contact was made, there would be no technical or social advance.

This prediction flew in the face of modern historical theories which said that technical and social advances depended upon the availability of surplus food due to a favourable climate and soil. Nevertheless, upon checking with anthropological studies and historical records, I found that the prediction was fulfilled completely. All communal societies, regardless of climate, good soil and surplus food, stayed in the stone-age unless they had regular contact with people of more advanced cultures.

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In order for knowledge seekers or cure seekers to develop, the elder children must be allowed to feel rejected. This can only happen if the children are left alone. These conditions would only be met if the children of the tribe were separated from each other, and from adults also. Such conditions do not exist in communal societies. The conditions are only found in individualistic societies, where there is private property, and where homes and gardens are separated from each other.

So the next prediction was that knowledge seekers, leading to technical and social advances on the one hand; and cure seekers leading to mass murder and criminality on the other hand, would only be found in individualistic societies. In such societies, there would be private property and individualistic enterprise resulting from private ownership.

Because of the individualistic enterprise nature of the society, the market place would be found in the centre of the community. This would contrast with communal societies, where any market place would be found between two tribes but not within the community.

I then checked through the historical records of sixteen ancient civilisations, including those of Egypt, China, Rome, Athens, the Incas and the Mayans. All had private property when they started. All had centrally placed markets in their settlements. All made technical and social advances, often completely independently. All had their fair share of mass murderers and psychopaths.

It was also noticeable that while the system of private property and individualistic enterprise remained in existence, the communities made continuous technical and social advances. If the private property system was abolished and a return made to communal enterprise, the advances came to a halt and the civilisation disintegrated.

Thus my second prediction was confirmed sixteen times over. Knowledge seekers and cure seekers do emerge within individualistic societies, and they disappear if the societies return to a communal system. This is well illustrated in the cases of China, Egypt and Rome.

Up to the time of the Chou Dynasty in Ancient China, the Chinese civilisation made continuous technical and social advances. The Chou Dynasty converted the private farmers into serfs, and from that time onwards China was governed on a feudal system. The farmers no longer worked for themselves and they lived in communal villages rather than their own private small holdings and farms. After the Dynasty had been established, civilisation and its attendant technical and social advances came to a halt.

The Egyptians were also private farmers until one of their Pharaoh's converted them into slaves. The slaves were organised into communal societies and the 'civilisation' stopped. The historical record of this conversion is in the Holy Bible (Genesis 47, Paras. 13-22).

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The Roman civilisation stopped in a similar way. The private holdings of the farmer citizens were converted into large estates and their previous owners were either killed or turned into slaves. Only the outward expansion of the Roman Empire, and the establishment of private farms by its soldiers, kept the civilisation going. Almost invariably good soldiers, administrators and emperors came from the outlying parts of the empire rather than the centre. When the private system collapsed, the 'civilisation' collapsed also.

As I have already indicated, the communal system produces mainly public response seekers. These are essentially public performers of one kind or another. They all like large audiences to perform to and respond with. Their occupations depend upon their confidence and ability, and the two are often inter linked. Public response seekers can be classified according to their prominence in front of an audience.

In the front rank are the actors, entertainers, dancers, orators, lecturers, priests and soldiers etc., that actually appear in public to do their 'act'.

In the second rank are those whose work is publicly seen and applauded, but who do not themselves emerge on the 'stage'. They include playwrights, authors, journalists, photographers, artists, craftsmen, architects, builders, farmers and manufacturers etc.

The individual response seekers are mainly gossips etc., who need a one to one situation and a certain amount of privacy. They may include secretaries, salesmen and shopkeepers.

The knowledge seekers would like an audience, either of individuals in the case of IKS 's or the public in the case of PKS 's. However, they get their security from learning about things, and by continually trying to improve themselves and their environment. The individual knowledge seekers may become good teachers or nurses etc. The public knowledge seekers will prefer to research into improvements in the environment -- which can be publicly acclaimed. They will probably aim for Nobel Prizes etc., and can be expected to publish their work.

The cure seekers aim to correct the deficiency of the individual or public audience which has not responded as the cure seeker thinks it should have done. All sorts of curative measures will be tried to ensure a consistent audience reaction. Experienced cure seekers can be expected to go for simple remedies which produce a predictable audience reaction. They are usually classified as 'mad' or 'deviant'.

I would have expected people with a background like that of Adolph Hitler or Joseph Stalin to be public cure seekers. Both grew up initially with two adoring parents and as such they would have been public response seekers as young children. Then the fathers of both started to react badly. So their mothers would continue to praise and applaud them while their fathers did the opposite. Naturally, since one half of the audience was still applauding, the children could conclude that their 'acts' were okay. Therefore they would blame the 'bad' half of their audience, and become public cure seekers aiming to correct the 'deficiency' of their audiences. (Their fathers have a lot to answer for). I expect Crippen and Haigh were individual cure seekers.

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I made further predictions on the basis of population growth or reduction. In an individualistic society, a low birth rate, or a high infant mortality rate would tend to produce mainly PBS 'a or IRS's This is because 'only' children or the youngest child are invariably of this type. A high birth rate, or low Infant mortality rate would tend to produce more knowledge seekers and cure seekers. This is because there would be more elder children.

Thus a rapid increase in population would tend to produce knowledge seekers etc., providing the society was an individualistic one. This prediction has also been confirmed historically. Such population increases are followed by periods of technical and social advances, and wars also.

So now I had made two predictions, based on my hypothesis, one concerning the relationship between technical and social advances, and individualistic societies; and one concerning the effects of a rapid population increase in such societies. Both predictions had been completely fulfilled.

Despite this, I still wasn't completely satisfied. I wanted to be on a really firm theoretical base. After all, the hypothesis suggested some substantial implications for our own society, and if I published the hypothesis at any stage, there might be unforeseen repercussions. I recalled the 'blood out of a stone' saying and thought of the need for an ancestral base. This pointed back to our pre-tribal ancestors which were supposed to be apes of some kind. Did apes also have response seekers? If my hypothesis was right they should have done.....

Chapter 4. Apes and Birds.

I considered the apes I had read about or seen films of. It was clear that apes were individual response seekers. Ape babies are brought up by their mothers only. There is no 'pairing' among the adults, except sometimes around mating time. The baby ape grows up responding only to its mother, because it takes about five years for the baby to be weaned-off its mother's milk, and on to other foods. In this time, the mother is the baby's sole provider of food as well as its main source of love, play, protection and transport. Inevitably, the baby ape grows up to be an individual response seeker.

All apes tend to respond to each other on a 'one to one' basis. They have a 'pecking' order which is determined by individual confrontation. The males and females are 'ranked' in this way. Mating is achieved after an individual display charge. Several males may mate the same female, but everything is done according to rank on a series basis.

While I was thinking of apes and their rearing patterns, two unrelated thoughts flashed into my mind. One concerned birds, which appeared to be public response seekers. The other thought concerned the major difference between humans and all other animals regarding their rearing patterns.

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Most birds 'pair off' for mating, and the subsequent rearing of their young. This would suggest that young birds would grow up to respond with more than one adult. Such birds would become public response seekers and therefore public performers. I could imagine that their courtship displays and territorial songs might be examples of such public performances. However, many of the mating dances etc. are not learned. This suggested that the behavioural responses of the birds might also include a structural element. Could such a structural element be found in apes?

I then considered the pattern of response seeking. Birds were PRS's. Apes were IRS's. Communal societies of humans were PRS's, while individualistic societies of humans were essentially IRS's and PRS's. There seemed to be a certain pattern.

While thinking of patterns, I turned my attention to the other thought which had crossed my mind. This thought concerned human rearing patterns -- and the fact that I had not thought of it before will give the reader some idea of my stupidity.

I had been looking for simple differences between the IRS apes and the PRS humans (of the communal society), -- looking for simple differences in behaviour; and I had not noticed the most obvious, basic, simple difference. It is a difference which makes humans distinguishable from all other animals. It is not only physiology -- it is behaviour.

All mammals except humans rear their young to semi-maturity before having another brood. Humans by contrast, may give birth to child after child long before the first baby is semi-mature. Apes have their young at five year intervals, while humans may have one child every nine months.

This is a very significant difference from a behavioural response point of view - because it means that only humans will have 'rejected' elder children and therefore knowledge seekers. All other mammals will remain IRS's or PRS's, if they have response characteristics. Yes, a very simple and basic difference, but one that took a couple of hours to get through my thick skull. How stupid can you get.

This simple difference prompted me to consider the effect of a multi-age brood on a ape society. If humans developed from apes, then there must have been a behavioural change from the IRS apes to the PRS response. PRS's develop when babies are brought up by more than one adult. What could induce ape mothers to allow other apes to bring up their babies?

I decided the answer was directly connected with mating. If a female ape was born with a genetic defect in her 'heat' mechanism, so that she failed to come 'off' heat after mating, this could cause an 'apparent' pairing situation and also lead to a multi-age family of young apes.

Then another thought came to me, How do apes stop inbreeding?

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Chapter 5. Inbreeding.

Human societies, whether communal or individualistic, have elaborate laws or tribal arrangements to stop inbreeding. As far as I know, other animals do not have such codes of law. How then, do they stop inbreeding? In the case of birds or insects, there were so many of them that they could mate on a chance basis and avoid inbreeding. But a troop of apes would tend to be much more parochial. Thus there would have to be a good deal of cross-breeding to stop inbreeding in an ape society. I hypothesized a possible solution.

It would be necessary for the larger and stronger males to mate the smaller and weaker females; and for the weaker males to mate the stronger females.

I decided that the high ranking males in a ape society would tend to mate the most timid females first. This would happen because the timid females would be the first to take up a sexual submission pose when the high ranking males made their display charges. As a result, the timid females would mother the sons and daughters of the high ranking males.

From a behavioural point of view, the timid, anxious female would be very responsive and therefore a very good mother. Her sons would grow up to be strong and secure, and as such would develop into high ranking males. Her daughters, however, would also be strong and secure, and as such would not be timid. Thus the timid females daughters would not be mated by the high ranking males, because the daughters would be very slow to take up the sexual submission pose.

The main difficulty with this hypothesis concerned the mating of the strong, secure females by the low ranking males. After all, if high ranking males could not mate such females, what chance would low ranking males have? Despite this, I decided that the hypothesis was right and that somehow the strong females were mated by the low ranking, weaker males.

A strong female would be a bad mother. Being very secure herself, she would not be anxious and would not respond quickly to her baby's needs. Her offspring would grow up anxious and insecure. Her sons would become low ranking males due to their timidity, while her daughters would become the timid females which were mated by the high ranking males. Thus the cycle would be completed with a continual interchange of characters, thus preventing inbreeding.

Apart from the difficulty of the mating of the strong females by the low ranking males, the hypothesis would work very well from a behavioural point of view. I was very fortunate in that there had been some excellent field-work done on apes. Jane van Lawick Goodhall had researched into the characteristics of chimpanzees in the Gorme River area of Tanganyika (Tanzania).

In her excellent book -- "In the Shadow of Man", she has described the mating habits of these apes, enabling my hypothesis to be tested. An examination of the reality as presented in her book, shows that the hypothesis is broadly correct. My difficulties over the mating of the strong females is solved in an entirely logical manner, which emphasizes again my own stupid, illogical thinking.

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What actually happens is as follows : --

The highest ranking males assert their authority by their charging displays. When such a male charges, the more timid apes run out of the way. The courting charge of the male is the same as the assertive charge.

When a female comes on 'heat', her bottom turns bright red and becomes quite swollen. As soon as the males spot such a female, they charge over towards her, with the highest ranking male to the fore. The more timid a female, the more quickly she runs out of the way. As she does so, she shows her bottom and this simply encourages the males to charge after her. The female runs away, simply to get out of the way of what appears to her to be a normal act of male assertiveness. But wherever she goes she is pursued by the high ranking males. Eventually she is caught, and a sort of gang rape takes place.

The highest ranking male mates her first and then allows other high ranking males to mate her. The low ranking males are chased away by the high ranking males. In this way the timid female is only mated by the high ranking males.

In Miss Goodhall's book "In the Shadow of Man", I would surmise that 'Flo' was just such a timid and anxious female. Because of this, Flo is a very attentive and responsive mother. By virtue of her favoured position among the high ranking males, Flo then became a high ranking female and dominated the other females. Flo's sons, Faben and Figan, became high ranking males as predicted. Flo's daughter Fifi, grew up to be a strong, secure female.

However, when Fifi came on 'heat', she became sexually aggressive. She flirted with all the high ranking males, positively thrusting her pink bottom at them. But the high ranking males did not immediately mate her. Instead they made calming gestures to show her there was no need to take up a sexual submission pose -- because they had not charged at her. If the high ranking males do mate such aggressive females, it is usually in a rather half hearted manner. It seems they are not interested in aggressive flirts, but prefer the excitement of the chase -- provided by the timid females.

Fifi then turned her attention to the low ranking males. As the low ranking males were kept away from the timid females by the high ranking males, they eagerly mated the sexually aggressive Fifi.

Thus the hypothesis was partly confirmed.

The Gorme Stream studies have not been going long enough to determine whether the daughters of Fifi will become timid females and thus responsive mothers like Flo. I would surmise however, that 'Marina' was a sexually aggressive female like Fifi. Marina was not a good mother. Her sons and daughters grew up to be timid and anxious. Marina's daughter was called 'Miff'. If my hypothesis was correct, I would have expected Miff to be a good mother. This prediction was in fact confirmed, although Miss Goodhall's team were very surprised at Miff's good mothering qualities. It will be interesting to see what sort of mother Fifi turns out to be.

I had now solved the problem of inbreeding to my own satisfaction and I went on to consider the effect of a female whose 'heat' mechanism would not switch off, because of a genetic defect.

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Chapter 6. 'Defective' Females?

Normal female apes come on 'heat' approximately once every five years. During the interval they continue to produce milk and rear their babies to semi-maturity. After five years, they come on 'heat' again, are re-mated and give birth to another baby.

A defective female, who did not come off 'heat' after mating, would continue to be mated up to and after the birth of her baby. In the following five years, when normal females would have had no more babies, the defective female would have one every nine months or so. This would lead to the following repercussions : --

1. The daughter of the defective females would probably inherit her defect.
2. The babies of the defective female would grow up surrounded by a lot of males because of their continuous interest in such a female. This would create an 'apparent' pairing situation, increasing the security of the babies. Thus the sons of such females would become high ranking males, while the daughters would become sexually aggressive females.
3. The sexually aggressive daughters of the defective female, and their daughters would mate for generations with the low ranking males, thus reducing the dimorphism of the apes.
4. Under the influence of the 'apparent' pairing effect the babies of such females would become public response seekers.
5. The much larger family produced by the defective female would require more food or higher calorie foods. More food would mean a much larger area would have to be covered in the ape society to obtain food supplies.

Higher calorie foods would indicate a change from a mainly vegetarian diet to a mainly meat diet. Both the hunting and food gathering activities would encourage the evolution of apes with a high power to weight ratio, and as such there would be a premium on good ground level locomotion.

Chapter 7. Individualistic Societies.

To help me with the problem of the transition of a communal society into an individualistic society, I turned to Jacob Bronowski's book "The Ascent of Man". I did not see the television series as I do not have a television, but my mother had given me a copy of the book at Christmas.

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Although I disagreed with many of Bronowski's conclusions, I found the book useful for reference purposes. Bronowski's facts may be right even if his conclusions are wrong.

In Chapter 2 of "The Ascent of Man", Bronowski describes the life of the Baktiari nomads and concludes that civilisation 'can never grow up on the move'. I disagree. I would predict that individualistic societies would emerge from just such nomads as the Baktiari.

In my view the survival methods adopted by communal tribal societies would depend upon their environment.

In equatorial forests, like the Amazon basin, where game and plant food are plentiful, I would expect hunting and food gathering to be the basis of life.

In sub-tropical regions, like the savannah of Africa, there are less trees, and grass can grow in abundance. This encourages grazing animals, and the society would tend to consist of hunters and herders.

In temperate forests, there is little grass, and the society would tend to be of the plot clearer and planter type.

In deserts, the limited grazing would mean that the tribal societies would have to herd the animals, in order to reduce the otherwise enormous hunting distances involved. Herders are essentially hunters with a captive herd of game.

Communal tribes in poor desert regions would be forced to split into separate families in order to ensure that each of the society's herds had sufficient grazing grounds to survive. I would make the point that a communal society of herders would have several small herds rather than one large one. This is because the male animals, such as bulls or rams, cannot coexist with other males. Two bulls or rams in the same field will fight. Nomads would therefore be forced either to split the bulls and rams, or to castrate them. However, to rely on one bull or ram and a single large herd would be suicidal. If the bull or ram died, before it could mate the females, the whole herd would die out and the tribal society would die with it. Thus the herds are broken up into small units, with one bull or ram to each herd or flock.

So desert tribes would be forced to separate in order to ensure the tribes collective survival. Each herd would tend to radiate from a water hole which would serve as a family base. The tribes would probably meet once a year to make up for any losses in rams or bulls, and to conduct normal communal activities.

The children of such separated families could grow up separated from other children in the tribe, and thus elder children could feel rejected. Therefore, only in desert nomads, like the Baktiari, would I expect to find the emergence of knowledge seekers and cure seekers. Civilisation would develop on the move. There would be plenty of time for knowledge seekers to plan improvements while guarding their flocks by night.

As the people of these tribes would almost certainly supplement their diet with any high calorie foods they could find in the desert, it would not take many generations of knowledge seekers to create an agricultural civilisation -- given the opportunity. Only knowledge seekers would take the opportunity.

Language of the Universe.....Maybe?

We know that the desert tribes of Israel had to split up into families because of poor grazing (Genesis Chapter 36 Para. 7). We also know that these tribes knew all about cross breeding of animals (Genesis Chapter 30). I think we can assume that the cross breeding of desert grasses to produce wheat was also the product of desert tribes. A survival conscious people like desert nomads would have the motive to grow such wheats around their water holes.

I regard it as highly significant that all sixteen civilisations I checked, had developed close to desert regions. They all retained herding animals as part of their agricultural system. All were animal herders turned planters. Chinese, Egyptian, Inca. All had different high calorie crops. All appeared to have developed separately. All had herding animals. All used irrigation extensively, suggesting a background consciousness of water conservation.

Thus the behavioural link was completed. In ape societies there were individual response seekers. In communal societies there were public response seekers; and in individualistic societies there were the six types found in 'advanced' western civilisations.

I had been brought up to think that only primates, like humans for example, reasoned things out. All other animals were instinctive and simply reacted in a mechanical sort of way to circumstances. Primates were supposed to be different from birds, reptiles, fish and insects. But were they so different? Birds had the same behavioural characteristics as the humans of communal tribes. Some fish are territorial and fight on a one-to-one basis. Could there be some structural elements, which were common to all animals, including humans, which our society had tended to overlook in its apparent desire to elevate itself on to a higher plane?

I pondered over the 'blood out of a stone' story, and thought of public response seeker birds. Was there a structural link?

Chapter 8. Structural Influences.

The possibility of instinctive behaviour made me wonder about the correctness of my hypothesis.

There is a lot of controversy among psychologists about whether people behave mainly through instinct or by learned responses. My hypothesis had been based solely on responses, -- between a baby and its parents; and between subsequent adults in society. However, the pattern which had been shown to exist suggested structural influences affecting the evolution of behaviour.

Language of the Universe.....Maybe?

At this point I decided to review the position and consider the philosophical aspects of my hypothesising, before continuing my research.

The 'blood out of a stone' story had forced me to consider of origin of personality types. The historical search had resulted in the confirmation of my hypothesis and revealed some interesting patterns in human society.

If civilisation depended upon the continuing emergence of knowledge seekers, and if this in turn depends on the right conditions for the development of such people, the lessons for our present day societies could be profound. Much of the mystery over the causes of the rise and fall of civilisations would disappear. Furthermore our attitudes concerning the apparent lack of intelligence of communal tribes would be corrected.

All of this information could result in a more understanding world. Wars and worry, caused by public response seekers in their roles as soldiers, priests and politicians, could be eliminated by a better informed public. On the other hand we might witness the development of some sort of behavioural engineering within our societies. Any new knowledge could be used for better or for worse.

This then, was a matter for my personal philosophy. I have always had a lot of faith in the common sense of ordinary people throughout the world; and while this newly discovered knowledge could be misused, I believed that most people would prefer to have the knowledge than remain in ignorance. The lack of knowledge in this area was already causing much distress, hardship and misunderstanding. Anyway, it was not my job to live peoples lives for them or play 'god' with new information.

The question of structural influences was also a matter for philosophy. In my view we live in an evolving world. The environment evolves and we evolve as part of that environment. Our knowledge is continually developing and many beneficial advances have been made due to that evolution. It was clear to me that knowledge would not stop evolving simply because I chose not to think about it.

The 'blood out of a stone' story had forced me back into the past to primitive tribal societies, then to apes, then birds, then fish, then insects and finally to the cells of which everything is made. All characteristics must come from somewhere and must be transmitted in some way. This pointed to mating and reproduction.

In view of the importance of mating, I decided to determine the mechanisms of mating at its simplest. I felt this would show me whether there were any parallels between the structural mechanisms of animals and their behaviour due to responses.

Language of the Universe.....Maybe?

In determining my career prediction hypothesis, I had reasoned things out myself first, and then checked history books etc., to see if my predictions would come true. They did, but at the cost of implying that existing historical theories about the development of civilisations were wrong. My hypothesis fitted the facts completely; the historians theories did not. The question arose therefore, as to whether I should continue to hypothesis about the structural side of things, and then check the facts afterwards; or should I use the normal method of trying to deduce a hypothesis from an examination of all known facts.

Well, success breeds success, and I decided to stick to the dictionary method which had brought me success before. I would hypothesise first and check the known facts afterwards. After all, I might turn up something original.

I was spurred on by an idea which had come to me while I was considering the mating habits of animals. I had studied apes, birds, fish, insects and even multi-cellular plants, and found that they all shared a common characteristic of structural significance. They all mated in a longitudinal alignment.

I couldn't remember anybody pointing that out before. Perhaps it was too basic and simple to be worthy of attention. The obvious is always very easy to overlook, unless you happen to be very simple and stupid like me. The question or 'why' they all mated in-line intrigued me. I decided it was due to the possibility that the 'germ' cells mated in-line. Thus it might be found that the pollen and the ovule, or the sperm and egg join in-line.

The plants or animals developed, after all, from such germ cells, and as such could be said to be the children of such cells. Any characteristics of a basic kind are invariably passed on by parents to their children, and mating was a very basic characteristic. This seemed to me to be a perfectly logical piece of reasoning.

Thus I was confronted with the problem of working out the mechanism of germ cell joins. Before I started, I considered the difference between uni-celled organisms and multi-celled ones. Uni-celled organisms do not mate in-line.

In fact, they do not mate. They reproduce by splitting into two parts. I wondered whether they split in-line. I decided to work out a possible split mechanism. Then I would work out the cause of the split and finally decide how the cell joining would operate.

My eventual solutions to the above problems, led to the making of predictions in the usual way. When I checked these predictions against known facts, I found they matched almost perfectly. By using the same simple reasoning, I put together a multi-hypothesis and each stage so precisely interlocked with known facts that I decided to write this book.

The hypotheses are fantastic. They are very simple and very basic, and they could have profound implications - for better or for worse.

If anybody is bold enough to publish this book, the reader will be able to decide whether my decision to write the book was correct.

I'm afraid I've never been very good at writing, my grammar is poor and I seem to have a natural aversion to prose and poetry. As a Chartered Surveyor, my report writing invariably let me down. I disliked writing essays at school and I must say I dislike having to write this book. I apologise, therefore, for my poor style and presentation. I trust the reader will forgive me my poor use of the English Language and will concentrate on the subject matter herein.

Language of the Universe.....Maybe?

Chapter 9. Universe and Nature.

In this chapter, I explain my philosophical views on the relationship of the universe and nature as I see it. I regard this as necessary background to explain my approach to the structural problems involved in the hypothesis. In the next chapter, I discuss the influence of time, as I see it, because this is a structural dimension which is easy to overlook when making 'still life' drawings. I start my hypothesis on uni-cell splits, otherwise known as binary fission in Chapter 11.

In my opinion we live in the universe of Hydrogen. I believe that hydrogen is the basic element from which all the others are derived. Nobody knows the shape of hydrogen but I conceive of it as a tetrahedron, that is, an equilateral triangle in three dimensions.

The question arises as to where hydrogen came from. In my view it is a development of nature. This means I see nature as something different from the universe. I conceive of nature as being something which is random and unpredictable. It is so unpredictable that you cannot even rely on its unpredictability. Nature is composed of random and unpredictable times and dimensions.

Hydrogen, as I have said, developed from nature and it is therefore built of nature. Unlike nature, however, hydrogen builds in a regular, predictable way. Thus most things in the universe of hydrogen are likely to be predictable. However, because the building material is nature, the unexpected may happen at any time.

Nature has dimensions which are finite and infinite. It also has dimensions which are finite at one end and infinite at the other. As hydrogen builds out of nature, these seemingly impossible and contradictory dimensions are found in the universe. In this way, most people can see only one end of a line at any one time. They cannot see both ends at once anymore than they can see both sides of the moon. They know the moon is finite, but they might have a hard job proving it.

When I think of nature, I think of irony and paradox. I also think of the unexpected. It might be some humour which makes me laugh involuntarily, or it might be the sudden stock of an accident.

When I think of the relationship of nature to the Universe of hydrogen, I keep being reminded of Trinity College, Cambridge. I lived most of my early life in Cambridge, so I know the City fairly well.

Trinity College represents to me, the College of Hydrogen. Trinity means a group of three acting as one, and considering that my view of hydrogen is that it is basically triangular, the two seem synonymous.

When you enter Trinity College from Trinity Street, you will pass through the 'great' gate. Above the portals is a statue of King Henry the Eighth, who founded the College. The great gate is an orderly, well built octagonal structure, which reflects the precise regularity of hydrogen. The statue of King Henry shows him holding a stone orb in one hand and a wooden chair leg in the other. For most visitors, the chair leg is unexpected and causes a laugh. Nature strikes its first blow.

Language of the Universe.....Maybe?

Having passed through the great gate, you will find yourself in a courtyard. It seems at first sight to be to be square, orderly, precise and predictable. There is an octagonal fountain in the centre. The paths are laid out in the form of a square, and are themselves formed of even, square paving stones. But then you notice, upon looking round, that the architectural styles of the buildings surrounding the courtyard are all different. Nature strikes again. You will further notice that the paths are edged with cobblestones, all random and unpredictable. Nature. However, to most people, the first courtyard seems somehow friendly and is very popular.

Then you walk through to the next courtyard. The architectural style is the same all through. The courtyard seems rather sterile and empty. The same can be said of the cloisters of Trinity College Library. This is considered to be an architectural masterpiece by some, but it seems rather cold and draughty. Most people hurry through to the 'backs'. The 'backs' is the name given to the River Cam as it winds its unpredictable way through the backs of the colleges. A nice, friendly river so it seems.

So this is the universe as I see it. The structure and regularity provided by the master builder hydrogen. The random unpredictability caused by the building material -- nature.

I have used the phrase "the universe of hydrogen" a number of times, implying that there may be other universes. So there may. However, it is doubtful whether we who are made from hydrogen, or its derivatives, could see beyond the confines of its structure. But with nature - you never know. Maybe.

I added the word 'maybe', because in my previous sentence I used the words "never know". It is a tendency or those who are built or the definite, structured materials of hydrogen to make definite, structured statements. Yes, we all make them. There - I've made another one.

With nature you know where you are and you newer know where you are at the same time ... or at different times..maybe. It's very difficult not to be definite even when you are being indefinite. I trust the reader gets the picture.

Chapter 10. Time Projections, Time Lag and Time Relativity.

Before I go on to discuss binary fission, I am going to consider some time projections. Time may be considered as a dimension which is linked directly to the other three. It is easily forgotten when structural drawings are made, and I will consider it first, so that we can have its influence in mind when considering binary fission mechanisms

Time projections show the possible alternative places an object could have mowed to, in any particular time lapse. Thus a man standing on the centre spot of the Wembley Football Stadium could walk ten paces forward in say ten seconds. In the same time, travelling at the same speed he could have gone in many different directions. A time projection shows where he could have got to, under these conditions.

Language of the Universe.....Maybe?

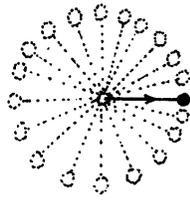
Of course, the projections are in three dimensions while this book has only two dimensions. The reader will have to consider the presentations as sectional forms or three dimensional solids. The projections are illustrated in Figure 1 as follows:-

- Figure 1 (a) This represents a single particle moving in a straight line. It projects a sphere, seen here as a circle.
- (b) This represents a single particle moving in a curve. This projects a spiral.
- (c) This represents a single particle moving in a spiral. This projects a triangle, square, diamond, in fact all known crystal shapes.
- (d) This represents a single particle oscillating backwards and forwards in a straight line. This projects a disc at right angles to the direction of the oscillation.
- (e) This represents two particles circling a common centre point, in the same direction. This projects a two armed spiral.
- (f) This represents two particles circling a common centre point, in opposite directions, one within the other. This projects an Ellipse.
- (g) This represents two particles spiralling around a common centre point in opposite directions, one within the other. This projects a wave.

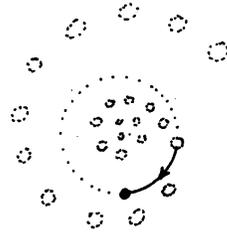
This last projection can be seen on Earth, in the action of rivers and currents. The river water represents particles spiralling inwards towards the centre of the Earth. If both the Earth and the rivers are considered to be moving, then each travels (relatively) in the opposite direction. Therefore rivers take the form of a wave.

In theory this should hold true for planetary paths also. (See Chapter 13).

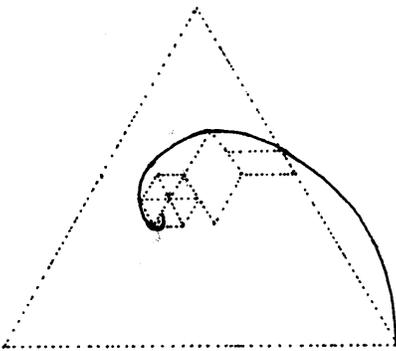
Figure 1.



(a)



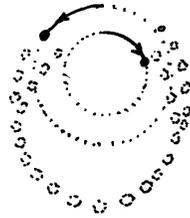
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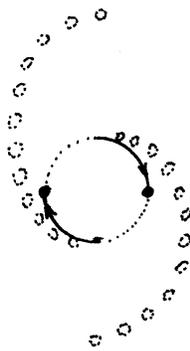
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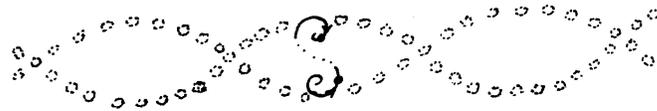
(d)



(e)



(f)



(g)

Language of the Universe.....Maybe?

While I'm on the subject of time projections, I'll consider the evolution of some basic universal concepts. Thus we have Figure 2.

- Figure 2(a) The circle represents the median between external and internal infinity.
- 2(b) The straight line represents relativity. It expresses the notional link between the external and internal infinities
- 2(c) The 'Y' represents divergence/convergence. Diverging from internal infinity to external infinity and converging from the external to the internal.
- 2(d) The 'H' represents a non-relative state, - that is a state without divergence or convergence.
- 2(e) The 'W' represents a state of continual divergence/convergence.
- 2 (f) The circle with a dot in the middle represents two particles moving relative to each other without any divergence or convergence.
- 2(g) The equilateral spiral represents two particles moving relative to each other, either diverging or converging at a constant angle.
- 2(h) The spiral/straight line represents two particles moving relative to each other, either diverging or converging at an increasing or decreasing angle.
- 2(i) The heart-shaped figure represents two particles moving relative to each other, constantly diverging/converging.

So much for time projections.

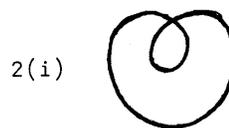
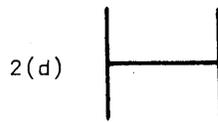
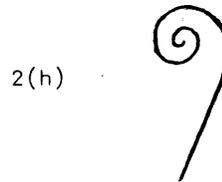
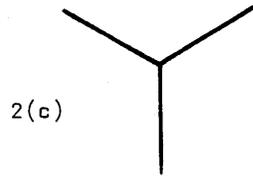
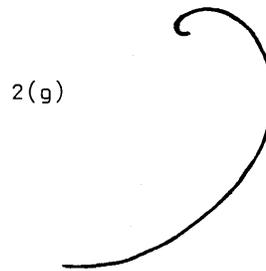
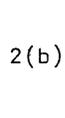
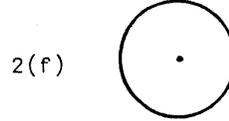
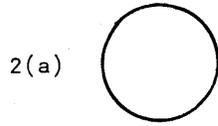
Next I would like to consider the effects of time lag. This is only Important in relative terms. On a large scale it shows up in space. When we view galaxies through our telescopes, we see them as certain overall shapes. Spirals, ellipses and spheres are common.

However, we see these galaxies through the agency of light. Now although light travels very quickly by human standards, the enormous size of the galaxies means that the light reaching the Earth is of varying age.

If the galaxies were stationary, the varying age of the light would not matter. But if the galaxies are moving - and most Astronomers accept that they are - then the age variance becomes significant

Thus a photograph which shows a galaxy to be disc-like in cross section, as most spiral galaxies are thought to be, may present a distorted image due to the effects of time lag. Such galaxies are more probably cone-shaped, like a Chinese coolie's hat, with the apex of the cone pointing in the direction of overall movement.

Figure 2



Language of the Universe.....Maybe?

I suspect the forces which shape galaxies are the same basic forces which shape the fruits and flowers of plants. Thus the spiral galaxies are like flowers, and the spherical galaxies are like fruits. The same basic forces produce the same basic shapes. If this analogy is correct, it suggests that the spherical galaxies are expanding while the spiral galaxies are contracting.

Finally I will consider the effects or what I call time relativity. For my purposes, this concerns the relationship of actual time taken as against possible time taken for a particle to travel from its starting point at any given speed.

Thus a particle moving in a straight line might move from point A to point B in one second. The time taken to get from point B to point A is also one second at the same speed. However, a particle travelling in a circle would take about three times longer to travel around the circumference as it would to travel across the diameter.

I express time relativity as a ratio of possible time to actual time assuming a constant speed. Thus the time relativity ratio for a straight line is 1:1. A circle is 1:1.507. A square is 1:6.74, while an equilateral triangle is 1:7.5.

In my view, it is time relativity which produces the oscillation affect and thus relative movement. Thus time relativity produces waves and differentiation.

Chapter 11 Binary Fission

The first thing I did regarding binary fission was to work out a possible structural mechanism by which it could work. I saw the uni-cell as a sort of house , with the chromosomes and nucleus as the inner furniture, and the cytoplasm etc. , as the garden. I conceived off the garden and furniture built out or elements and compounds which had a positive or negative charge, and which were attracted to opposite charges on the inside or outside of the house. If the house were divided, the garden and furniture would be similarly divided.

For convenience I used a cube as a model to work on. I started by simply dividing the cube into two , as though I was slicing a wedding cake into two equal parts. This left me with two half cubes. very simple and very basic - but not right. It was not correct because uni-cells split into two parts each off which is identical in shape to the original cell. Half cubes are not the same as cubes.

I had to think of a structure which could be split into two shapes each of which was the same as the original. Not so easy. After some thought, I decided that it would have to be a cube within a cube. Thus we have the basic cube in Figure 3(a). The X's mark the outside corners or the outer cube. Both the inner and outer cube have the same volume.

Language of the Universe.....Maybe?

By reversing the outer cube, I ended up with two identical cubes, shape-wise - as in Figure 3(b). However, although they are identical in shape, they are not identical with the original cube in their composition. The former outside corners, marked by the X's, are now on the inside.

So we have a second reversal. As both cubes are now in the open, both can go through the second reversal process, as in Figure 3(c). Now we have two cubes each of which is identical with the parent cell in every way.

The chromosome 'furniture' would be attracted to the inside of the new uni-cells while the cytoplasm 'garden' would join the outside. Each cube has a hole in the middle which allows for the replication of the chromosomes etc., and each cell also has an external area which is the same as the original, allowing the cytoplasm etc., to double up in the same way.

This structural model seems to conform to the basic mechanisms of binary fission and would result in an even division of both the nucleus and the cytoplasm.

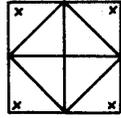
Unfortunately it does not work out in practice from a structural point of view. A cube does not, in fact, reverse into another cube. It works in two dimensions, in this book, -- but not in three dimensions. Nevertheless, the principle appears valid and the structure will work in three dimensions on a tetrahedron base. Thus we have Figure 3(d).

In some ways this may seem a rather complicated mechanism. It is in fact the simplest way to divide a structure into two parts in such a way as to produce an exact replica of the original structure.

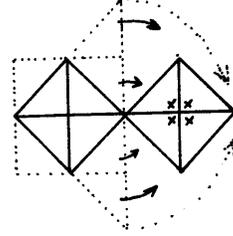
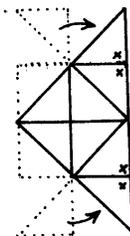
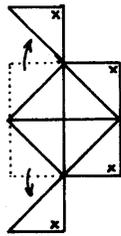
As far as I could see from my researches, there has been no field work done on the structural mechanism of binary fission. The process has been observed and photographed but no three dimensional working models have been made which reproduce the process's structure.

However, by observing plants and animals, we can see the mechanism employed, particularly in reproduction and growth. In plants, this is the normal method of growth with the outer skin continually reversing to expose more inner skin. Leaves, petals, sepals etc., all reverse - turning their inside surface outwards. Many fruits split by reversal to reveal their seeds, and the seeds later split and reverse to allow the shoot and root to develop. Animals use the mechanism in mating and birth. Continuous reversal is a much used mechanism.

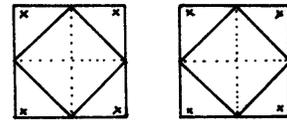
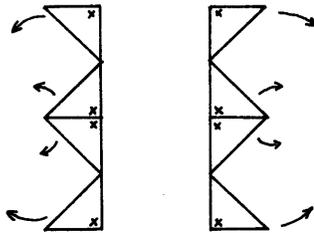
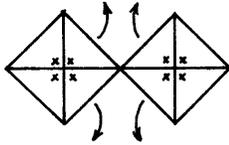
Figure 3



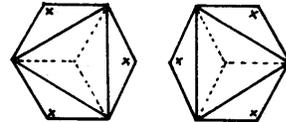
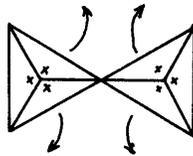
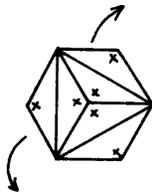
3(a)



3(b)



3(c)



3(d)